

*ADDITIONAL*



# *Service Manual*

**Original**

**STEREO AMPLIFIER**

# **A-X530 HEZ**

**ORDER NO.  
ARP1462**

- **For servicing this type, please refer to the A-X530/HEZ service manual (ARP1445) with the exception of this additional service manual.**
- **This additional service manual is applicable to the HEZ type.**

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## **1. CONTRAST OF MISCELLANEOUS PARTS**

## NOTES:

- Parts without part number cannot be supplied.
  - Parts marked by “◎” are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
  - The ▲ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
  - For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.  
★★ GENERALLY MOVES FASTER THAN ★  
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
  - When ordering resistors, first convert resistance values into code form as shown in the following examples.  
Ex. 1. When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J =

**Ex. 1** When there are 2 effective digits (any digit apart from 0), such as 500 Ohm and 47k Ohm (tolerance is given to be 5%, and  $K = 10\%$ ).

$560\Omega$   $56 \times 10^4$   $561\dots$  RD1/4PS 5 6 1 J

$47k\Omega$   $47 \times 10^3$  473..... RD1/4PS 4 7 3 J

$0.5\Omega$  0R5.....  $RN2H\Box\Box\Box K$   
 $1\Omega$  010.....  $RS1P\Box\Box K$

122 Section B. It can be used in high precision metallography.

**Ex. 2** When there are 3 effective digits (such as in high precision metal film resistors)

$5.62k\Omega$   $562 \times 10^3$  5621..... RNI/4SR 5 6 2 1 F

The A-X530/HEZ type is the same as the A-X530/HE type with the exception of the following sections.

| Mark | Symbol & Description  | Part No.   |   | Remarks |
|------|---|--|---|---------|
|      |   | A-X530<br>HE type  | A-X530<br>HEZ type                                      |         |
|      | AF Main assembly<br>Power supply assembly<br>SP OUT assembly<br>Operating Instructions<br>(English/German/French/Italian)<br>Operating instructions (German)<br>Screw | AWZ1409<br>.....<br>Non supply<br>ARE1051<br>.....<br>.....<br>ABA-115 | AWZ1530<br>Non supply<br>Non supply<br>.....<br>ARC1064 |         |

## **2. ELECTRICAL PARTS LIST**

## **AF MAIN assembly (AWZ1530)**

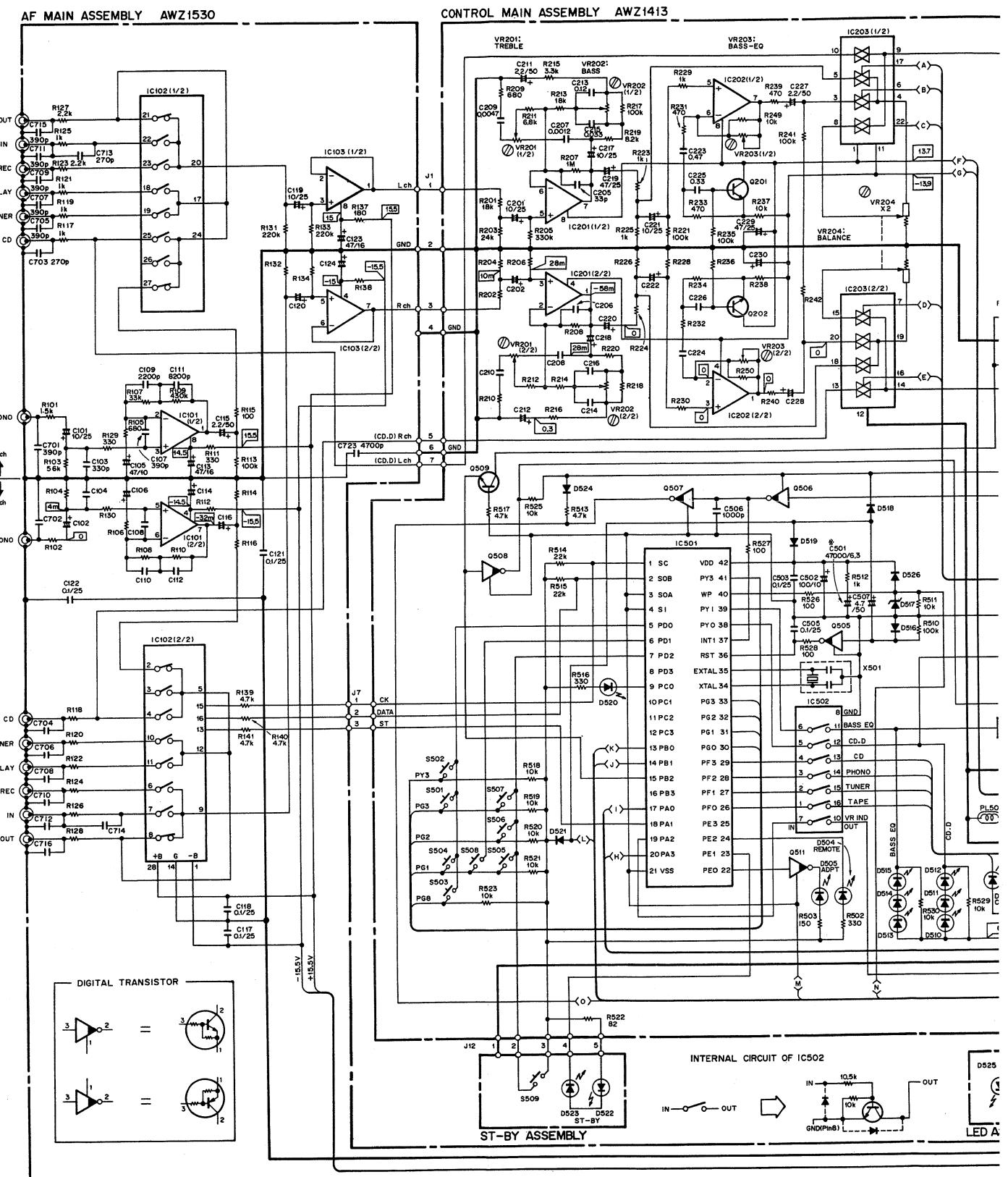
| <b>SEMICONDUCTORS</b> |                                 | <b>Part No.</b>                              |
|-----------------------|---------------------------------|--|
| <b>Mark</b>           | <b>Symbol &amp; Description</b> |  |
| ★★★                   | IC101                           | M5218P                                       |
| ★★★                   | IC103                           | M5218PF                                      |
| ★★★                   | IC601                           | M5278L56(A)                                  |
| ★★★                   | IC301, IC302                    | PA0016                                       |
| ★★★                   | IC602                           | TA7291S                                      |
| ★★★                   | IC102                           | TC9163N                                      |
| ★★★                   | Q408                            | RN2203<br>(DTA124ES)<br>(2SA1346)            |
| ★★★                   | Q407                            | RN1203<br>(2SC3400)                          |
| ★★★                   | Q405                            | 2SA1048<br>(JA101)<br>(2SA1115)<br>(2SA933S) |

| <b>Mark</b> | <b>Symbol &amp; Description</b> | <b>Part No.</b>                               |
|-------------|---------------------------------|---|
| ★★★         | Q313, Q314                      | 2SA1145                                       |
| ★★★         | Q319, Q320                      | 2SA968  |
| ★★★         | Q307 - Q310                     | 2SA992  |
| ★★★         | Q604                            | 2SB560  |
| ★★★         | Q301 - Q306, Q401, Q402         | 2SC1845                                       |
| ★★★         | Q317, Q318                      | 2SC2238                                       |
| ★★★         | Q403, Q404                      | 2SC2458<br>(JC501)<br>(2SC1740S)<br>(2SC2603) |
| ★★★         | Q315, Q316                      | 2SC2705                                       |
| ★★★         | Q406, Q602, Q603                | 2SD438  |
| ★★★         | Q601                            | 2SD880  |
| ★           | D601                            | D5SB20F                                       |
| ★           | D406                            | RD13ESB                                       |

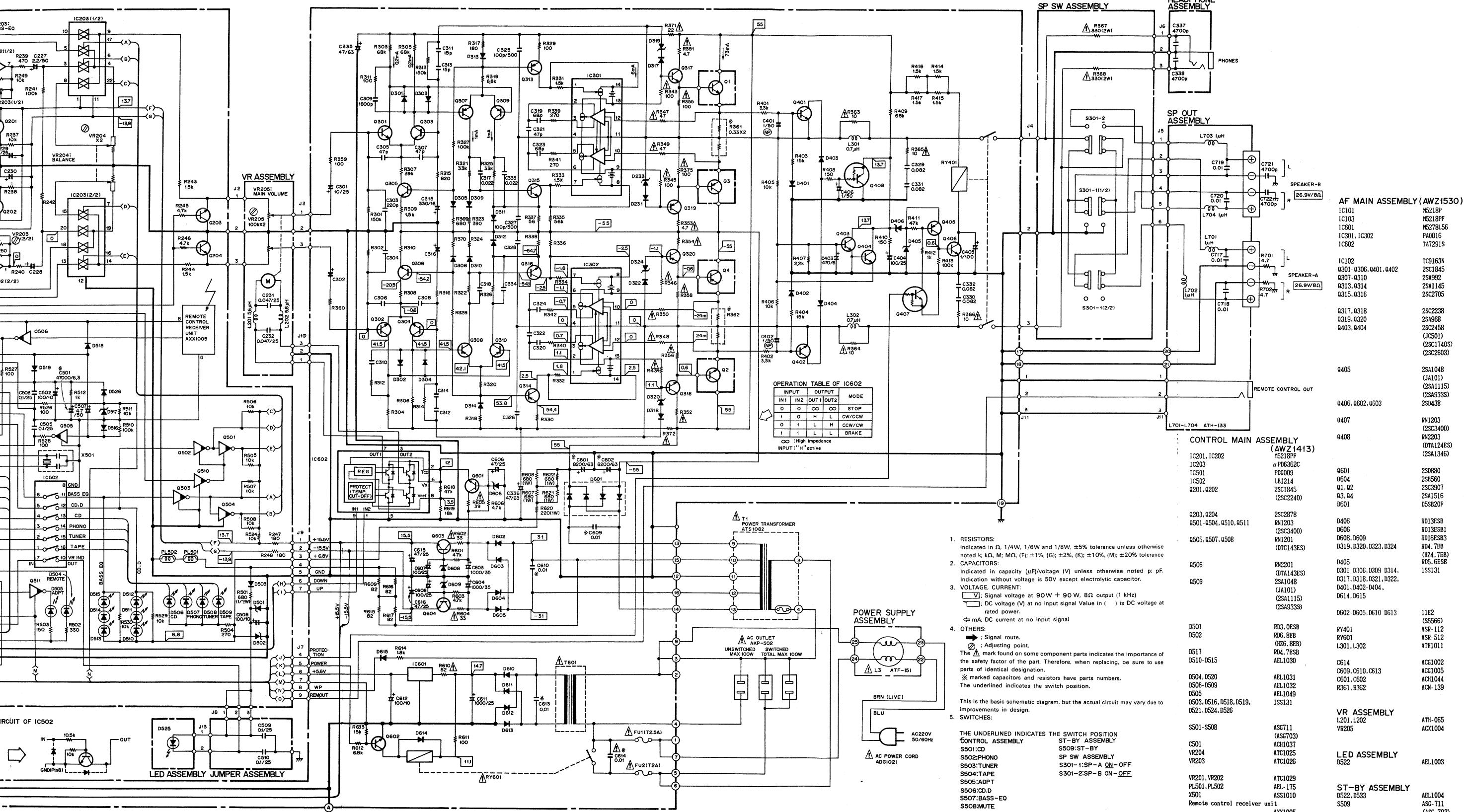
### 3. SCHEMATIC DIAGRAM

| Mark                         | Symbol & Description  | Part No.   |
|------------------------------|---|--|
| ★                            | D606  | RD13ESB1   |
| ★                            | D608,D609   | RD16ESB3   |
| ★                            | D319,D320,D323,D324   | RD4.7EB<br>(HZ4.7EB)   |
| ★                            | D405  | RD5.6ESB   |
| ★                            | D301-D306,D309-D314,D317,<br>D318,D321,D322,D401-D404,<br>D614,D615                         | 1SS131   |
| ★                            | D602-D605,D610-D613   | 11E2<br>(S5568)  |
| <b>RELAYS</b>                |   |  |
| Mark                         | Symbol & Description  | Part No.   |
| ★★                           | RY401 Relay (PROTECTION)  | ASR-112  |
| ★★                           | RY801 Relay (POWER)   | ASR-512  |
| <b>COILS AND TRANSFORMER</b> |   |  |
| Mark                         | Symbol & Description  | Part No.   |
|                              | L301,L302 AF Choke coil<br>(0.7μF)  | ATH1011  |
| ⚠                            | T601 Power transformer<br>(AC110,120-127/220V,240V)   | ATT1015  |
| <b>CAPACITORS</b>            |   |  |
| Mark                         | Symbol & Description  | Part No.   |
| ⚠                            | C614 (0.01μF/400V)<br>C609,C610,C613<br>(0.01μF/150V)                                       | ACG1002  |
|                              | C601,C602 (8200μF/63V)<br>C325-C328   | ACG1005  |
|                              | C311-C314<br>C303,C304<br>C703,C704,C713,C714<br>C305-C308,C321,C322<br>C319,C320,C323,C324 | ACH1044<br>CCCSL101K500  |
|                              | C401,C402<br>C405<br>C406<br>C101,C102,C119,C120<br>C612                                    | CEANP010M50<br>CEAS010M100<br>CEAS010M50<br>CEAS100M25<br>CEAS101M10 |
|                              | C404<br>C611<br>C603,C604<br>C115,C116<br>C105,C106   | CEAS101M25<br>CEAS102M25<br>CEAS102M35<br>CEAS2R2M50<br>CEAS470M10   |
|                              | C113,C114,C123,C124<br>C606<br>C403<br>C301,C302<br>C607,C608                               | CEAS470M16<br>CEAS470M25<br>CEAS471M6<br>CEYA100M25<br>CEYA101M25    |
|                              | C315,C316<br>C615,C616<br>C335,C336<br>C317,C318,C333,C334<br>C329-C332                     | CEYA331M16<br>CEYA470M25<br>CEYA470M63<br>CFTXA223J50<br>CFTXA823J50 |
|                              | C309,C310   | CKCYB182K50  |

| Mark                         | Symbol & Description   | Part No.                                      |
|------------------------------|--|---|
|                              | C103,C104<br>C107,C108,C701,C702,C705-C712,C715,C716<br>C117,C118,C121,C122<br>C109,C110   | CKCYB331K50<br>CKCYB391K50                    |
|                              | C723<br>C111,C112  | CKCYX104M25<br>CQMA222J50                     |
|                              |  | CQMA472K50                                    |
|                              |  | CQMA822J50                                    |
| <b>RESISTORS</b>             |  |   |
| Mark                         | Symbol & Description   | Part NO.                                      |
|                              | R361,R362 Resistor network<br>(0.33Ωx2)  | ACN-139                                       |
| ⚠                            | R313-R316,R359,R360<br>R365,R366,R371,R372,R610<br>R343-R350,R355-R358,R363,<br>R364   | RDR1/4PM□□□J<br>RD1/4PMFL□□□J<br>RD1/4PMF□□□J |
| ⚠                            | R351-R354,R602,R604,R605<br>R607,R608,R620-R622<br>R103,R104,R131-R134,R139-<br>R141,R317,R318,R339-R342,<br>R369,R370,R403-R407,R410-<br>R413,R612-R614,R618,R619 | RFA1/4PS□□□J<br>RS1LMF□□□J<br>RD1/8PM□□□J     |
|                              | Other resistors  | RD1/4PM□□□J                                   |
| <b>OTHERS</b>                |  |   |
| Mark                         | Symbol & Description   | Part NO.                                      |
| ⚠                            | Terminal 6P<br>(ADAPTER IN/OUT,TAPE1,<br>REC/PLAY,TUNER,CD)  | AKB-117                                       |
|                              | Terminal 2P (PHONO)  | AKB-119                                       |
|                              | Transistor socket  | AKH-017                                       |
| <b>SP OUT assembly</b>       |  |   |
| <b>COILS</b>                 |  |   |
| Mark                         | Symbol & Description   | Part NO.                                      |
|                              | L701-L704 AF Choke coil(1μF)   | ATH-133                                       |
| <b>CAPACITORS</b>            |  |   |
| Mark                         | Symbol & Description   | Part NO.                                      |
|                              | C717-C720<br>C721,C722   | CQMA103K50<br>CQMA472K50                      |
| <b>RESISTORS</b>             |  |   |
| Mark                         | Symbol & Description   | Part NO.                                      |
|                              | R701,R702  | RD1/4PM4R7J                                   |
| <b>OTHERS</b>                |  |   |
| Mark                         | Symbol & Description   | Part NO.                                      |
|                              | Terminal 8P (Speaker)<br>Mini-Jack<br>(REMOTE CONTROL OUT)   | AKE-111<br>AKN-207                            |
| <b>Power supply assembly</b> |  |   |
| <b>COIL</b>                  |  |   |
| Mark                         | Symbol & Description   | Part NO.                                      |
|                              | L3 Line filter   | ATF-151                                       |



A



B

C

D



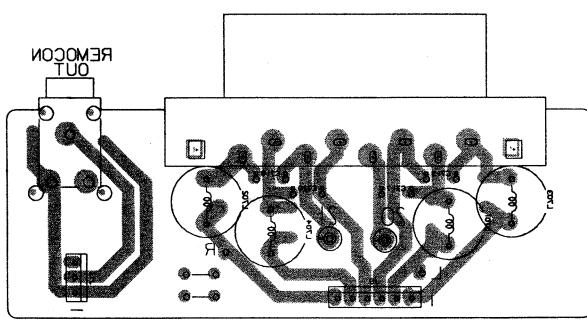
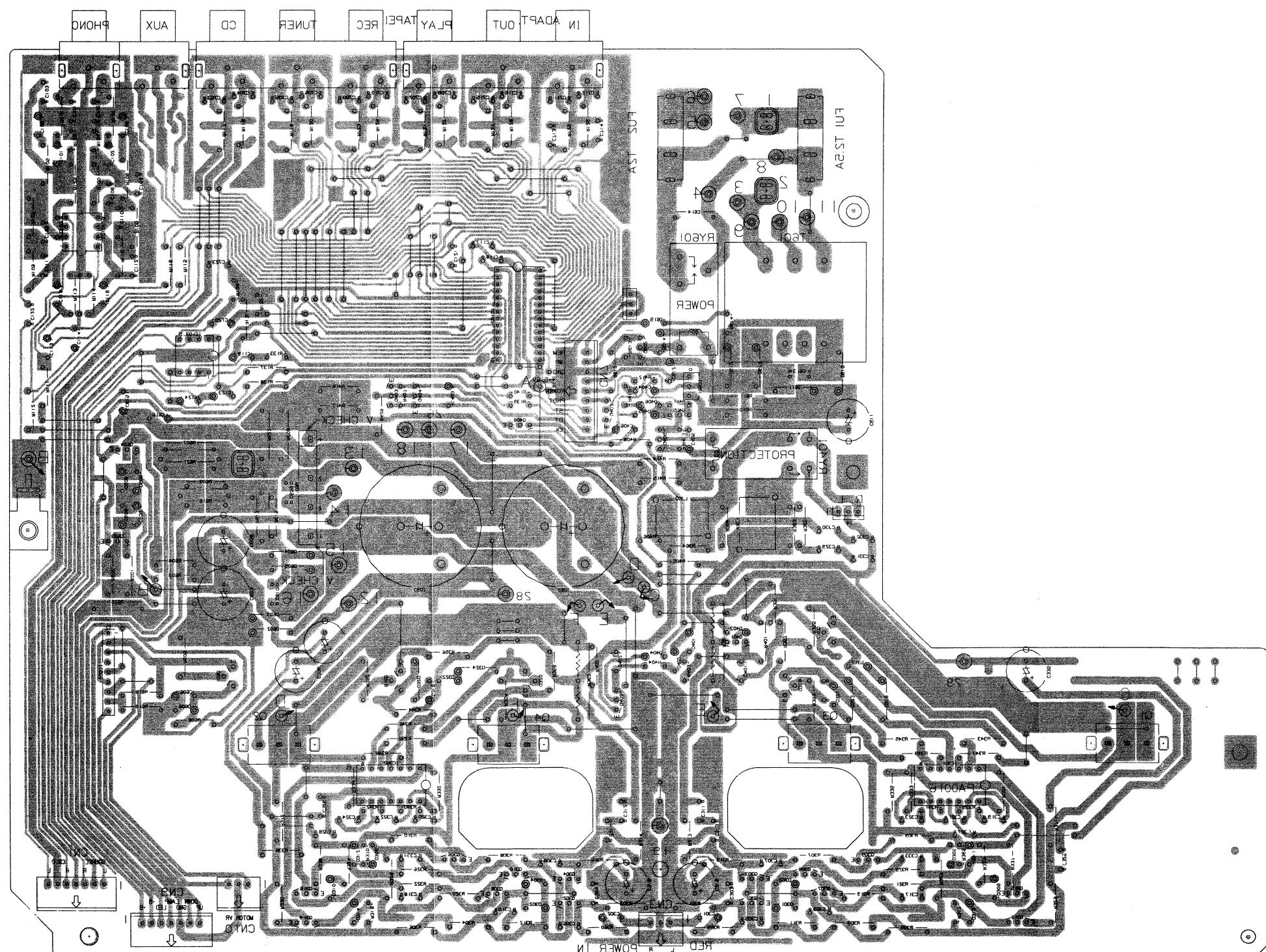
4.P.C. BOARD PATTERNS

**NOTE**  
This P.C.B. connection diagram is given to assist manufacturers in  
nworks series circuit boards. It is not a normative specification.  
The series circuit boards are designed to be used with  
standard P.C.B. components.

| Part Name              | Counterboring die/gauge base/saw stop | PCB, bevelled die/gauge base/saw stop |
|------------------------|---------------------------------------|---------------------------------------|
| Turner tool            |                                       |                                       |
| Reamer/turner base     |                                       |                                       |
| Diodes                 |                                       |                                       |
| Resistor               |                                       |                                       |
| Capacitor (Position 1) |                                       |                                       |
| Capacitor (Position 2) |                                       |                                       |

| Part Name           | PCB, pattern definition, indexation | Order No |
|---------------------|-------------------------------------|----------|
| IC                  | IC                                  |          |
| Switch              | 2                                   |          |
| Relay               | RY                                  |          |
| Coil                | F                                   |          |
| Filter              | E                                   |          |
| Variable resistor   | AR                                  |          |
| 2-pole 5-way switch | A5                                  |          |

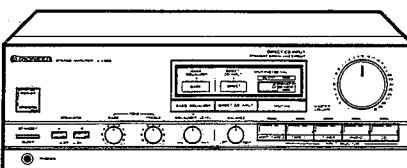
- 3. The **checkbox** remains **marked** with **(option checked)** when selecting **remainder**.
- 4. The **radio** **remains** **marked** with **(option selected)** when **checkboxes** are **selected**.
- 5. The **transistor** or **lenzini** **E** is **selected** when **the** **button**.





# Service Manual

## Original



ORDER NO.  
ARP1445

STEREO AMPLIFIER

# A-X530

MODEL A-X530 COMES IN THREE VERSIONS DISTINGUISHED AS FOLLOWS:

| Type | Power requirement                         | Export destination |
|------|---|--------------------|
| HE   | AC220V, 240V (switchable)*                | European continent |
| HB   | AC220V, 240V (switchable)*                | United Kingdom     |
| SD   | AC110V, 120-127V, 220V, 240V (switchable) | General market     |

\*Change the primary wiring of the power transformer.

- This service manual is applicable to the HE, HB and SD types.
- As to the HB and SD types, please refer to pages 22-23.

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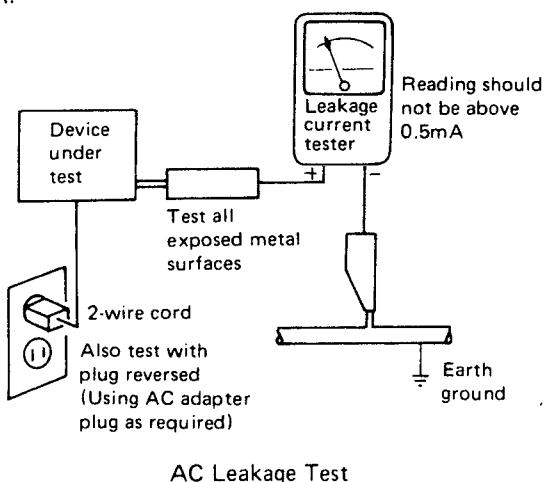
# 1. SAFETY INFORMATION

## 1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

### LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

## 2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, the PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

# 2. SPECIFICATIONS

### Amplifier Section

|  |                                      |
|--|--------------------------------------|
| DIN continuous power output (both channels driven) |                                      |
| 1 kHz, 1%, 8 Ω.....                                | 90 W + 90 W                          |
| DIN music power (both channels driven)             |                                      |
| 1 kHz, 1%, 8 Ω.....                                | 150 W + 150 W                        |
| Total harmonic distortion                          |                                      |
| 1 kHz, 45 W, 8 Ω .....                             | 0.003%*                              |
| Input (sensitivity/impedance)                      |                                      |
| PHONO.....   | 2.5 mV/50 kΩ                         |
| TUNER, CD, TAPE PLAY, ADAPTOR .....                | 150 mV/50 kΩ                         |
| Overload level                                     |                                      |
| PHONO 1 kHz, 0.1% .....                            | 150 mV                               |
| Output level                                       |                                      |
| TAPE REC, ADAPTOR OUT .....                        | 150 mV                               |
| Frequency Response                                 |                                      |
| PHONO.....   | 20 Hz to 20 kHz ±0.5 dB              |
| TUNER, CD, TAPE PLAY, ADAPTOR .....                | 10 Hz to 70 kHz $\pm\frac{1}{2}$ dB  |
| DIRECT CD.....                                     | 10 Hz to 100 kHz $\pm\frac{1}{2}$ dB |
| Tone Control                                       |                                      |
| BASS .....   | ±8 dB 100 Hz                         |
| TREBLE .....                                       | ±8 dB 10 kHz                         |
| BASS EQUALIZER .....                               | (MAX) +10 dB 60 Hz                   |
| MUTING .....                                       | —∞                                   |
| Hum and Noise (IHF short circuited, A network)     |                                      |
| PHONO.....   | 72 dB                                |
| DIRECT CD INPUT .....                              | 102 dB                               |
| Hum and Noise (DIN, continuous power/50 mW)        |                                      |
| PHONO.....   | 68 dB/60 dB                          |
| DIRECT CD INPUT .....                              | 82 dB/62 dB                          |

### Power Supply/Miscellaneous

#### Power requirements

|                              |                     |
|------------------------------|---------------------|
| European model.....          | AC 220 V~, 50/60 Hz |
| U.K., Australian models..... | AC 240 V~, 50/60 Hz |

#### Power consumption

|                              |       |
|------------------------------|-------|
| European model.....          | 450 W |
| U.K., Australian models..... | 450 W |

#### AC outlets

|                        |       |
|------------------------|-------|
| Switched (x 2).....    | 100 W |
| Unswitched (x 1) ..... | 100 W |

|                 |   |
|-----------------|---|
| Dimensions..... | 360 (W) x 344 (D) x 115 (H) mm<br>14-3/16 (W) x 13-5/8 (D) x 3-2/4 (H) in |
|-----------------|---|

|              |                     |
|--------------|---------------------|
| Weight ..... | 7.3 kg (16 lb 1 oz) |
|--------------|---------------------|

### Accessories

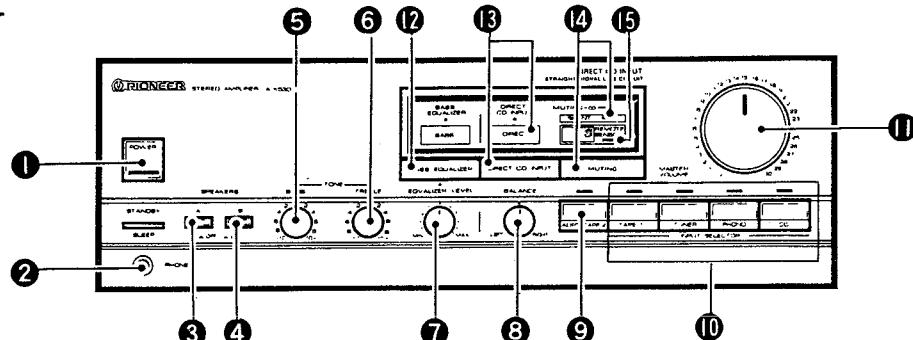
|                              |   |
|------------------------------|---|
| Remote control unit.....     | 1 |
| Batteries AAA/R03 .....      | 2 |
| Operating instructions ..... | 1 |
| Control cord.....            | 1 |

\* Specifications and design subject to possible modification without notice due to improvements.

• • Measured by Audio Spectrum Analyzer.

### 3. PANEL FACILITIES

#### FRONT PANEL



##### **① POWER switch/STANDBY (SLEEP) indicator**

Press to turn power to the unit ON and STANDBY.

This indicator flashes when the accessory remote control unit is used to turn the SLEEP key. When the SLEEP key is ON, the indicator will light. (Initially it will flash slowly, then gradually become faster.)

Approx 60 minutes after the sleep timer is turned ON, the power switch will be turned STANDBY automatically.

- The POWER switch selects the transformer's secondary even in STANDBY position. The unit's circuitry will work as long as the power cord is connected to a power outlet.
- When not using the unit for a long period, disconnected the power cord.

##### **② PHONES jack**

When using headphones, insert the plug into this jack.

##### **③ SPEAKERS A selector switch**

Use this switch to listen to the speaker systems connected to the SPEAKERS A terminals.

[ON] — Depressed position: Sound is heard from the speaker systems.

[OFF] — Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

##### **④ SPEAKERS B selector switch**

Use this switch to listen to the speaker systems connected to the SPEAKERS B terminals.

[ON] — Depressed position: Sound is heard from the speaker systems.

[OFF] — Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

##### **NOTE:**

*When the speaker system is connected to only one speaker terminal (A or B) and both A and B selector switches are ON, there will be no sound. Turn ON only the selector to which the speaker system is connected.*

##### **⑤ BASS tone control**

Use to adjust the low-frequency tone. The center position is the flat (normal) position. When moved to the right, low-frequency tones are emphasized; when moved to the left, low-frequency tones are de-emphasized.

##### **NOTE:**

*This function does not operate when the DIRECT CD INPUT switch is in the ON position.*

##### **⑥ TREBLE tone control**

Use to adjust the high-frequency tone.

The center position is the flat (normal) position. When moved to the right, high-frequency tones are emphasized; when moved to the left, high-frequency tones are de-emphasized.

##### **NOTE:**

*This function does not operate when the DIRECT CD INPUT switch is in the ON position.*

##### **⑦ EQUALIZER LEVEL control**

When the BASS EQUALIZER switch is ON, you can control the degree of enhancement of very low frequencies below 60 Hz in variable using this control. Set this control to the desired position.

##### **NOTE:**

*This function does not operate when the DIRECT CD INPUT switch is in the ON position.*

##### **⑧ BALANCE control**

Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, move toward the LEFT position and if the left side is louder, move toward the RIGHT position.

##### **NOTE:**

*This function does not operate when the DIRECT CD INPUT switch is in the ON position.*

##### **⑨ ADPT/TAPE2 switch/indicator**

Use when there is an adaptor component (graphic equalizer, etc.) or tape deck connected to the ADAPTOR/TAPE 2 terminals.

[OFF] — Indicator goes out position: When not in use.

[ON] — Indicator lights position: When using the adaptor component or listening to the tape deck.

##### **NOTE:**

*When no connections are made to the ADAPTOR/TAPE 2 terminals, or when they are not in use, be sure to set this switch to the OFF position. (No sound will be heard if it is set to the ON position.)*

##### **⑩ INPUT SELECTOR switches/indicators**

Use to select playback source.

[TAPE 1] — Press when listening to tape playback with a tape deck.

[TUNER] — Press when listening to AM or FM broadcasts with a tuner.

[PHONO] — Press when listening to record playback on a turntable.

[CD] — Press when listening to a compact disc playback with a CD player.

**⑪ MASTER VOLUME control**

Use to adjust volume level.

Move to the right to increase volume.

Move to the left to decrease volume.

**⑫ BASS EQUALIZER switch/indicator**

By pressing this switch ON, the indicator will light and powerful sound reproduction will be obtained.

Use this function as desired when listening to a digital source such as a compact disc.

*NOTE:*

*This function does not operate when the DIRECT CD INPUT switch is in the ON position.*

**⑬ DIRECT CD INPUT switch/indicator**

Use this switch/indicator when you do not wish to pass the output from a piece of equipment connected to the CD terminals through the various frequency adjusting circuits (BASS, TREBLE, BASS EQUALIZER, BALANCE).

[ON] — When the switch is in this position, the indicator lights and the signals input from the CD terminals are reproduced without passing through the various frequency adjusting circuits.

This results in flat, pure sound which is a more faithful reproduction of the digital source.

[OFF] — When the switch is in this position, the indicator goes out, and the signal selected by the INPUT SELECTOR switches are reproduced.

*NOTE:*

*When this switch is ON, the signals from the source connected to the CD terminals are output from the speaker system, and also the signals from the source selected by the INPUT SELECTOR switch are output from the TAPE1 REC terminal and the ADPTOR/TAPE2 REC terminal. Consequently, if you wish to compensate the sound from the source connected to the CD terminals using recording equipment or an adaptor, press the CD of INPUT SELECTOR switch to select the source connected to the CD terminals.*

**⑭ MUTING (-∞) switch/indicator**

Use to temporarily cut sound volume.

When depressed ON, the sound volume will be cut off (-∞).

When set to OFF, the sound will return to its previous volume.

**⑮ REMOTE SENSOR/indicator**

The accessory remote control unit can also be used to operate this component.

This component features a built-in microcomputer which will recall the last-set positions of the following switches for up to about one week after the power cord is disconnected. As a result, when the power is turned ON again, the previously set positions will be recalled automatically:

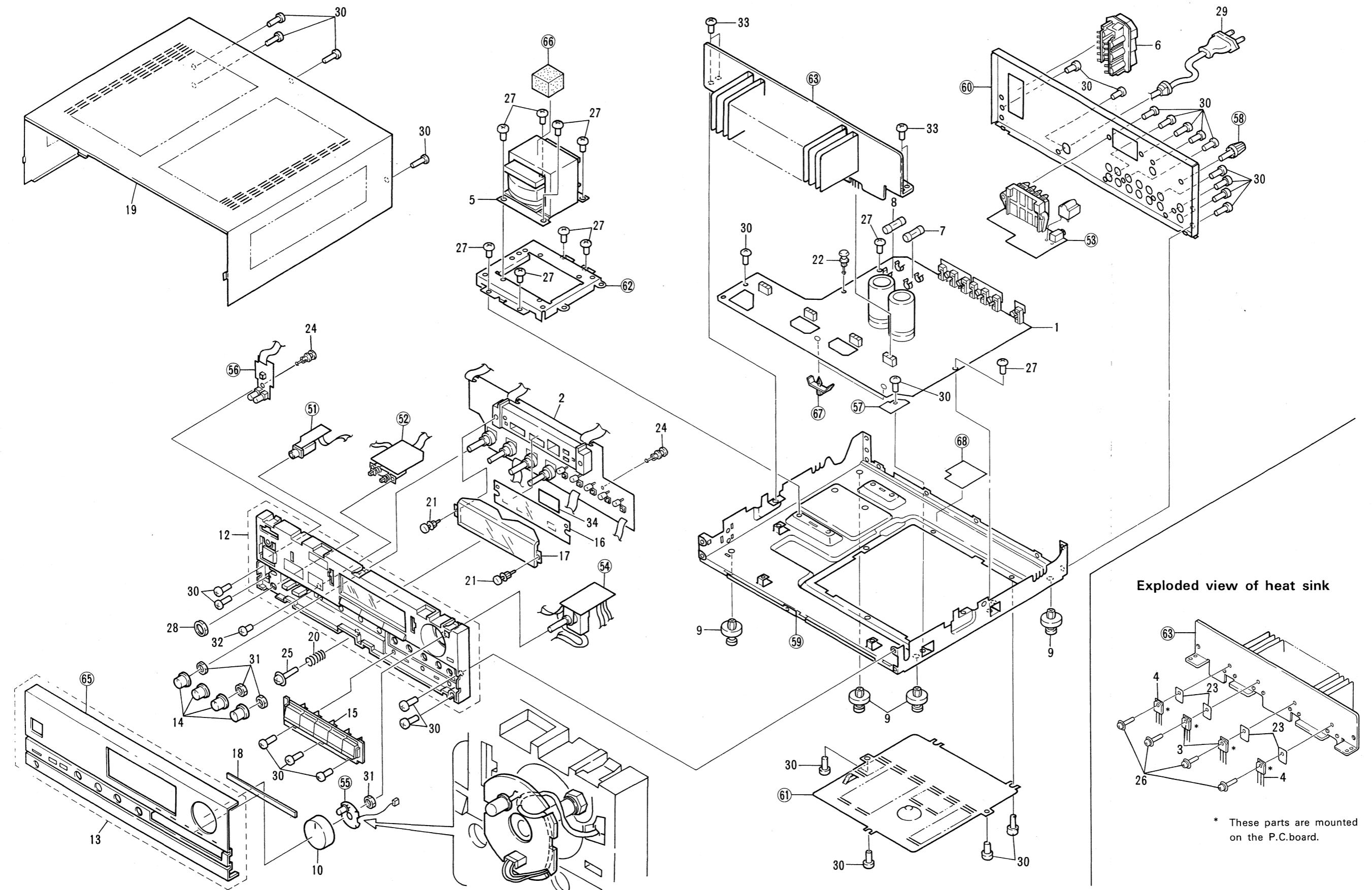
- |                          |                    |
|--------------------------|--------------------|
| • ADPT/TAPE2 switch      | • INPUT SELECTOR   |
| • BASS EQUALIZER switch  | • POWER ON/STANDBY |
| • DIRECT CD INPUT switch | • MUTING switch    |

When the unit is not used for more than a week, the memorized setting positions will be erased, and returned to the following settings:

- |  |         |
|--|---------|
| • POWER switch . . . . .                 | STANDBY |
| • MUTING switch . . . . .                | OFF     |
| • INPUT SELECTOR switches . . . . .      | TUNER   |
| • BASS EQUALIZER ON/OFF switch . . . . . | OFF     |
| • ADPT/TAPE2 switch . . . . .            | OFF     |
| • DIRECT CD INPUT switch . . . . .       | OFF     |

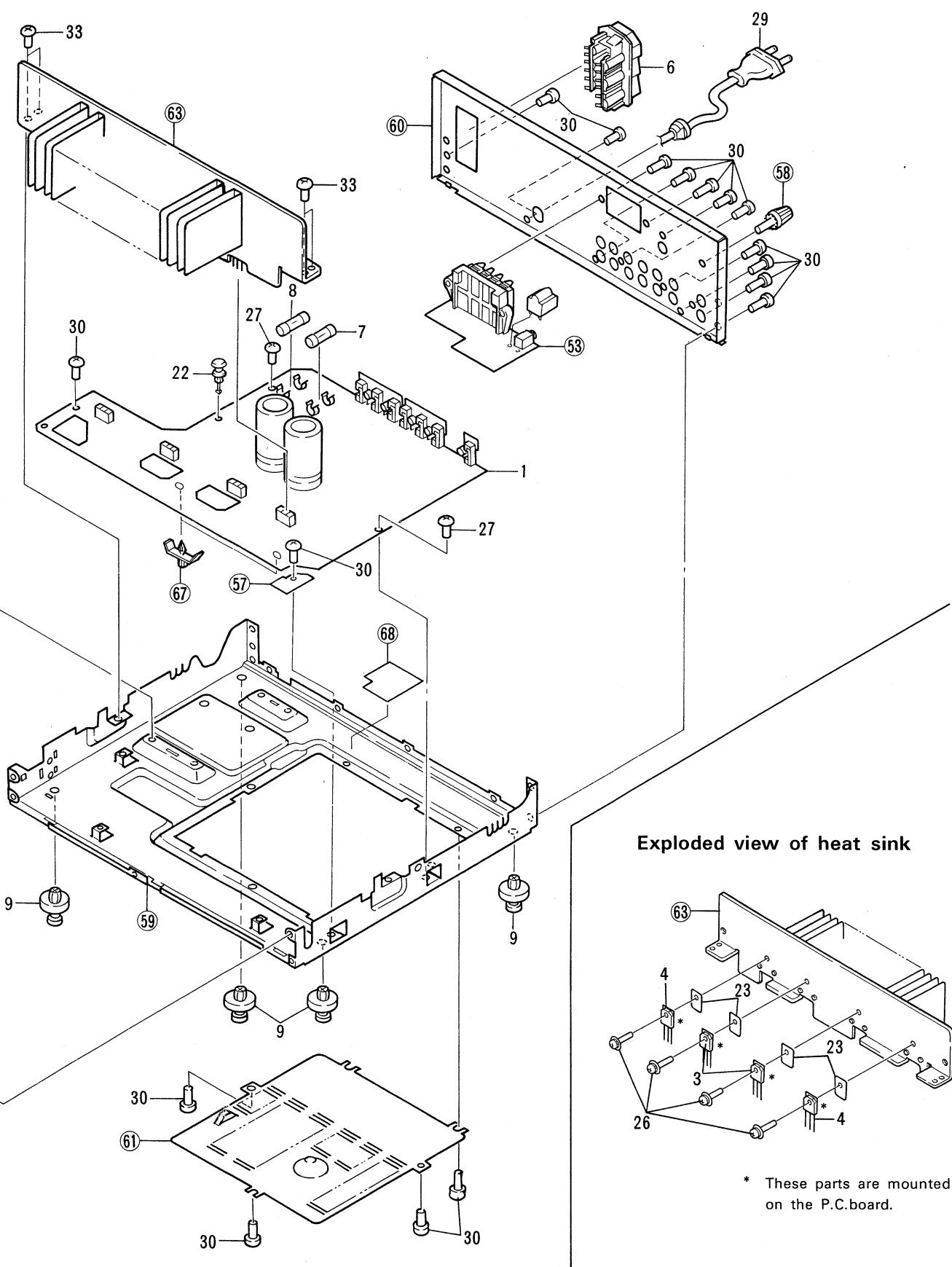
## 4. EXPLODED VIEWS AND PARTS LIST

## Exterior



## **Exploded view of heat sink**

\* These parts are mounted  
on the P.C.board.

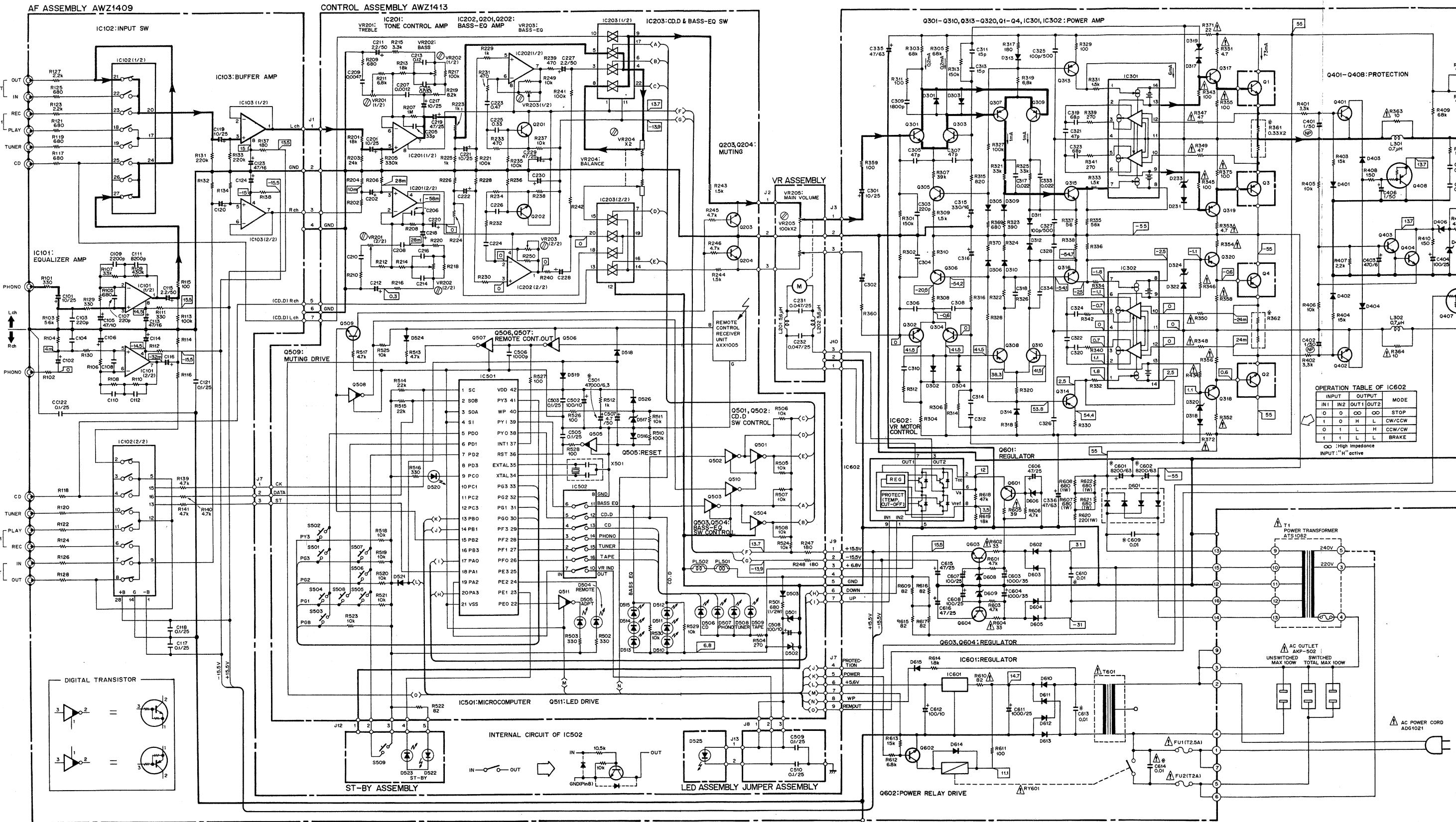
**A****B****C****D****NOTES:**

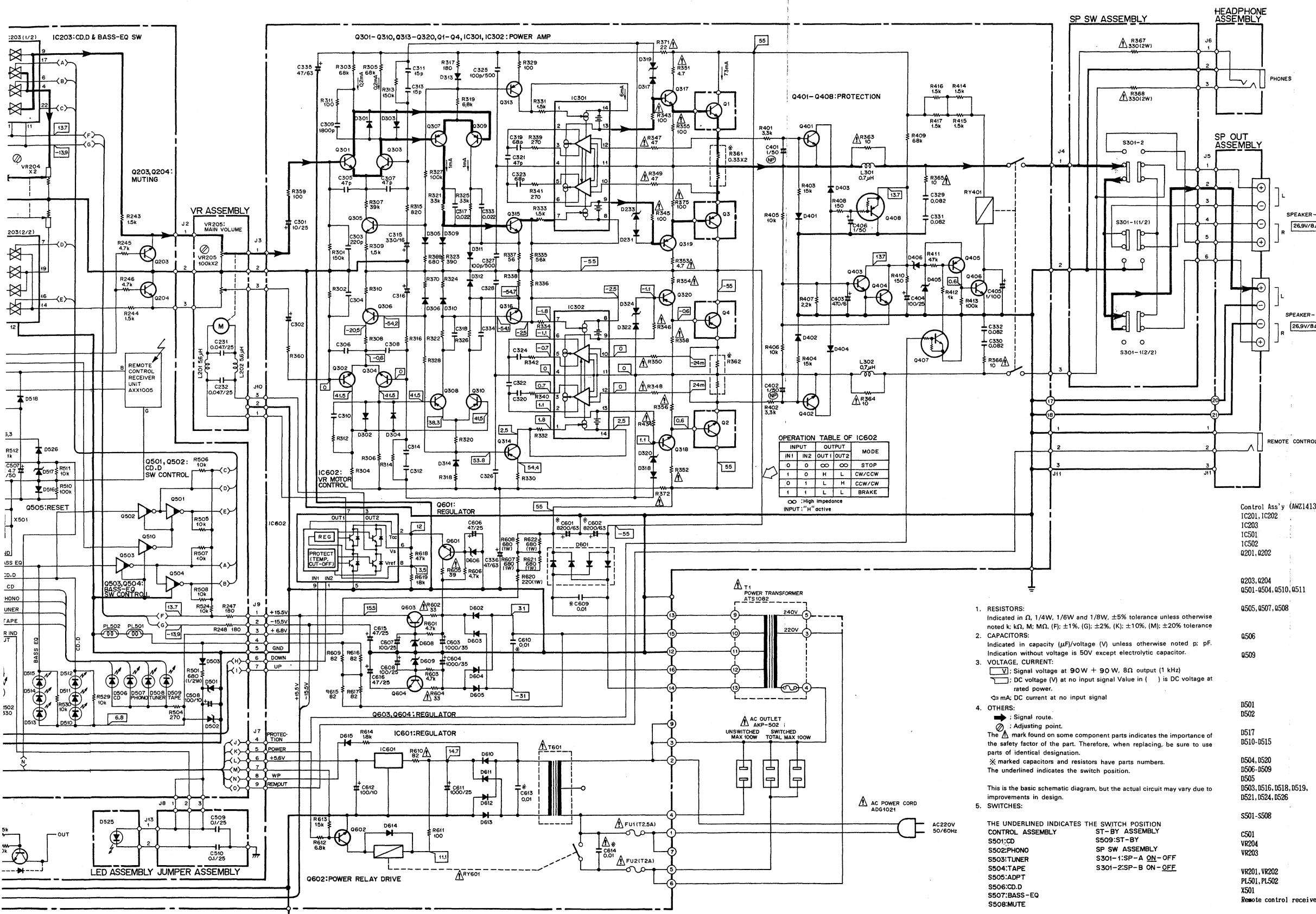
- Parts without part number cannot be supplied.
- The **▲** mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.
- ★★ GENERALLY MOVES FASTER THAN ★**  
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by **●** are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

**Parts List of Exterior**

| Mark | No. | Part No. | Description  | Mark | No. | Part No.  | Description        |
|------|-----|----------|--|------|-----|-----------|--------------------|
|      | 1   | AWZ1409  | AF Main Assembly                                       |      | 28  | ABN-065   | Nut                |
|      | 2   | AWZ1413  | Control Main Assembly                                  |      | 29  | ADG1021   | AC Power cord      |
| ★★   | 3   | 2SA1516  | Transistor (Q3, Q4)*                                   |      | 30  | BBZ30P080 | Screw              |
| ★★   | 4   | 2SC3907  | Transistor (Q1, Q2)*                                   |      | 31  | FZK       |                    |
| ▲ ★  | 5   | ATS1082  | Power transformer<br>(220V/240V, T1)                   |      | 32  | NK90FUC   | Nut                |
|      | 6   | AKP-502  | AC Socket 3P (AC OUTLET)                               |      | 33  | VMZ30P060 | Screw              |
| ▲ ★★ | 7   | AEK-017  | Fuse (T2A, FU2)  |      | 34  | ABA-298   | Filter             |
| ▲ ★★ | 8   | AEK-403  | Fuse (T2.5A, FU1)                                      |      |     |           |                    |
|      | 9   | AEP-320  | Leg assembly   |      | 51  |           | Headphone assembly |
|      | 10  | AAB1034  | Knob (MAIN VOLUME)                                     |      | 52  |           | SP SW assembly     |
|      | 11  |          | .....  |      | 53  |           | SP OUT assembly    |
|      | 12  | AMB1208  | Panel base assembly                                    |      | 54  |           | VR assembly        |
|      | 13  | ANB1116  | Front panel assembly                                   |      | 55  |           | LED assembly       |
|      | 14  | AAB1033  | Rotary knob (BASS,<br>TREBLE, BASS-EQ, BALANCE)        |      | 56  |           | ST-BY assembly     |
|      | 15  | AAD1161  | Function knob<br>(ADAPTOR, TAPE1, TUNER,<br>CD, PHONO) |      | 57  |           | JUMPER assembly    |
|      | 16  | AAK1389  | Display sheet  |      | 58  |           | Terminal (GND)     |
|      | 17  | AAK1278  | Display plate  |      | 59  |           | Chassis            |
|      | 18  | AMR1162  | Indicator Lens   |      | 60  |           | Rear panel         |
|      | 19  | ANE1074  | Bonnet case  |      | 61  |           | Bottom plate       |
|      | 20  | ABH1032  | Coil spring  |      | 62  |           | Transformer holder |
|      | 21  | AEC-384  | Nylon rivet  |      | 63  |           | Heat sink          |
|      | 22  | AEC-525  | Nylon rivet  |      | 64  |           | .....              |
|      | 23  | AEC-818  | Mica sheet   |      | 65  |           | Front panel        |
|      | 24  | AMR1066  | Plastic rivet  |      | 66  |           | Cushion rubber     |
|      | 25  | ABA-252  | Screw  |      | 67  |           | Spacer             |
|      | 26  | ABA-297  | Screw  |      | 68  |           | Balire             |
|      | 27  | ABA1011  | Screw  |      |     |           |                    |

## 5. SCHEMATIC DIAGRAM





AF Ass'y (AW1409)

 M5218P  
 IC101  
 IC103  
 IC601  
 IC301, IC302  
 IC602  
 TA7291S
 
 TC9163N  
 2SC1845  
 2SA992  
 2SA1145  
 2SC2705
 
 2SC2238  
 2SA968  
 2SC2458  
 (J501)  
 (2SC1740S)  
 (2SC2603)
 
 2SA1048  
 (JA101)  
 (2SA1115)  
 (2SA933S)  
 2SD438
 
 0406, 0602, 0603  
 0407  
 0408
 
 BN1203  
 (2SC3400)  
 RN2203  
 (DTA124E)  
 (2SA1346)
 
 Control Ass'y (AMZ1413)  
 IC201, IC202  
 μPD6362C  
 IC501  
 PDG009  
 LB1214  
 0201, 0202  
 2SC1845  
 (2SC2240)
 
 0203, 0204  
 0501-0504, 0510, 0511  
 0505, 0507, 0508  
 0201, 0201  
 RN1203  
 (2SC3400)  
 BN1201  
 (DTA143ES)
 
 0506  
 RN2201  
 0301-0306, 0309-0314,  
 0317, 0318, 0321, 0322,  
 2SA1048  
 (JA101)  
 (2SA1115)
 
 D405  
 D406  
 D606  
 D608, D609  
 D319, D320, D323, D324  
 D501  
 RD13ESB  
 RD13ESB1  
 RD16ESB3  
 RD4, 7EB  
 RD5, 6ESB  
 15S131
 
 0509  
 D405  
 D301-0306, 0309-0314,  
 0317, 0318, 0321, 0322,  
 2SA1048  
 (JA101)  
 (2SA1115)
 
 D614, 0615  
 (2SA933S)
 
 D602-D605, D610-D613  
 11E2  
 (S5566)
 
 D501  
 RD3, 0ESB  
 RD6, 0ESB  
 (H26, 86B)  
 RD4, 7ESB
 
 D502  
 RY401  
 RY601  
 L301, L302
 
 D517  
 D510-D515  
 AEL1030
 
 C614  
 C609, C610, C613  
 C601, C602  
 R361, R362
 
 D504, 0520  
 AEL1031  
 D506, 0509  
 AEL1032  
 D505  
 AEL1049  
 D503, D516, D518, D519,  
 D521, D524, D526
 
 ISS131  
 11E2  
 (S5566)
 
 D501-S508  
 ASG711  
 (ASG703)
 
 C501  
 ACH1037  
 VR204  
 ATC1025
 
 VR203  
 ATC1026
 
 LED Ass'y  
 D522
 

AEL1003

 ST-BY Ass'y  
 D522, D533  
 S509
 
 AEL1004  
 ASG-711  
 (ASG-703)
 

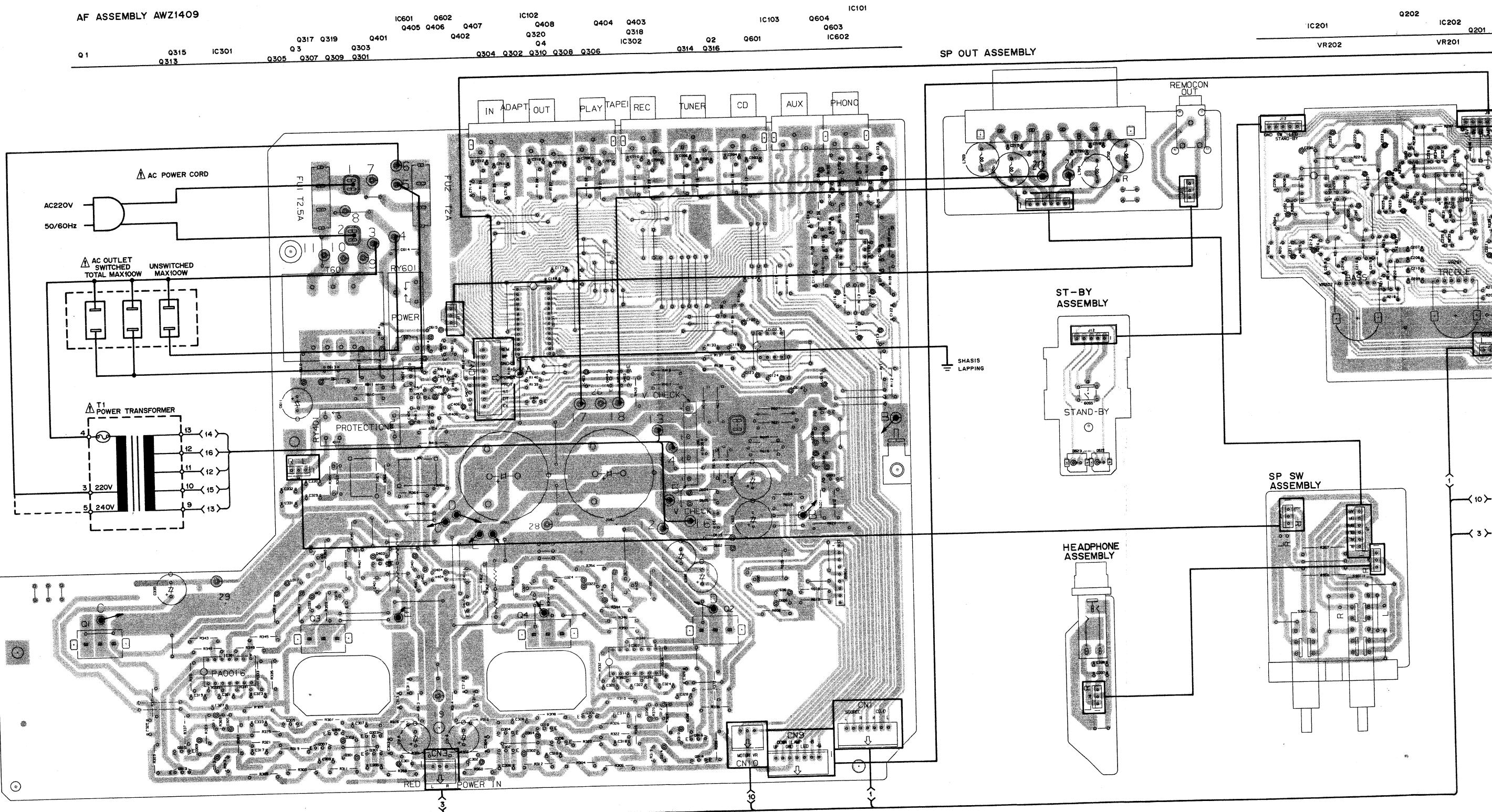
A

B

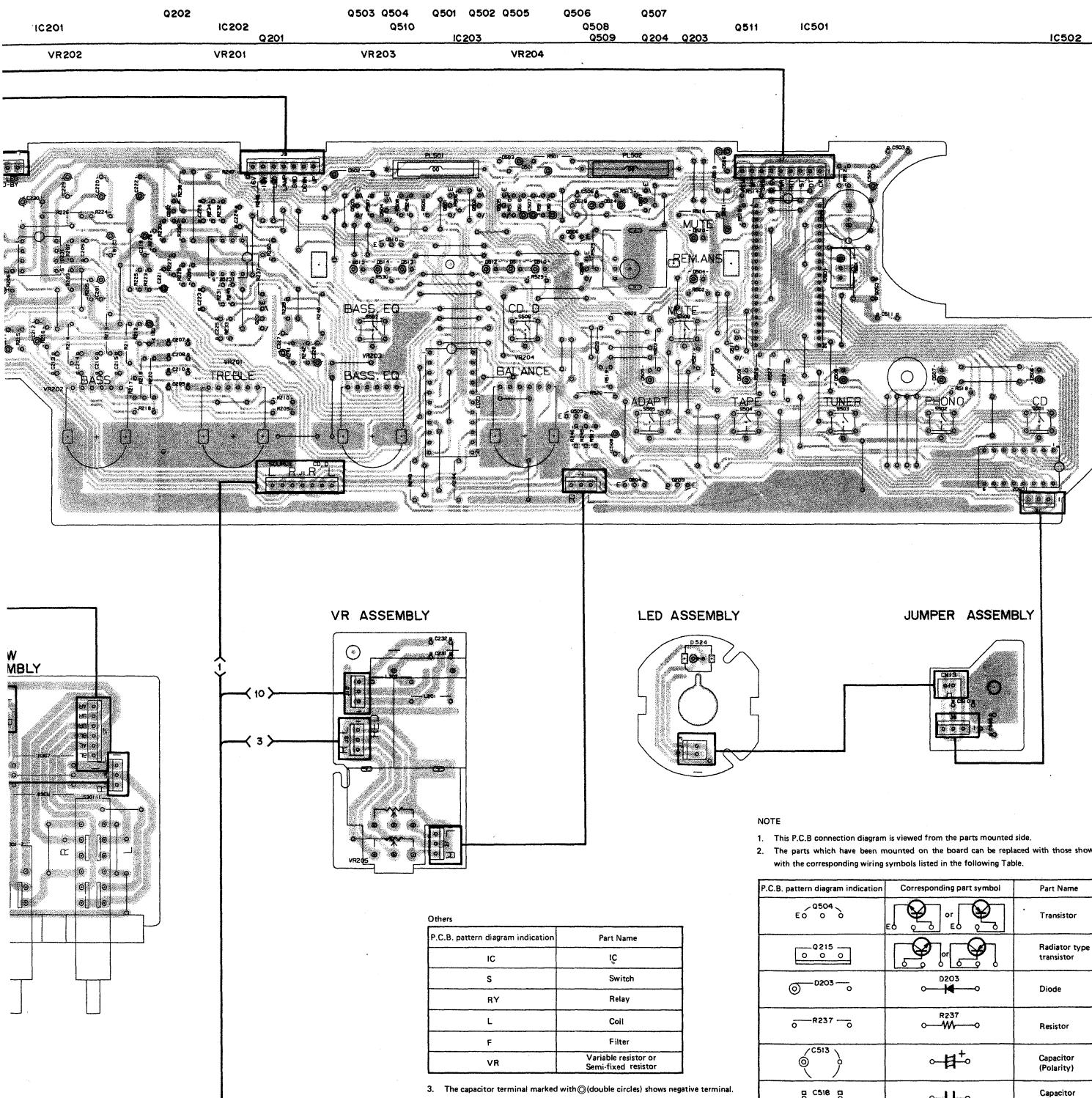
C

D

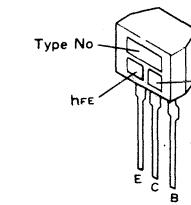
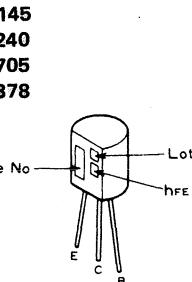
## 6. P.C.BORDS CONNECTION DIAGRAM



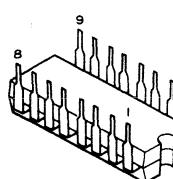
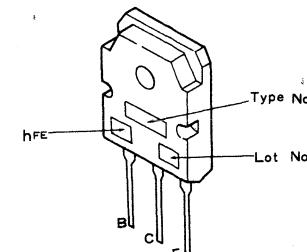
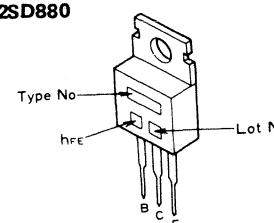
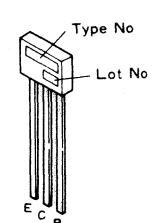
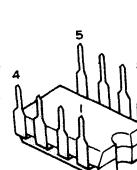
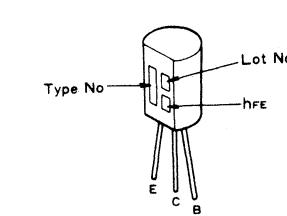
ROL ASSEMBLY AWZ1413



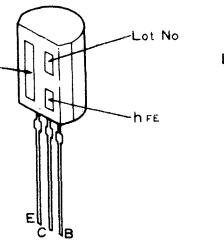
## External appearance of transistors and ICs

2SA933S  
2SC1740S2SA1145  
2SC2240  
2SC2705  
2SC2878

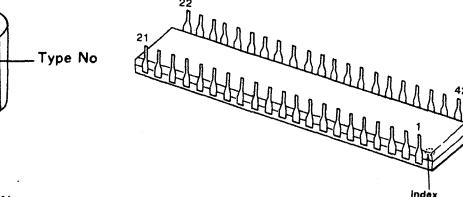
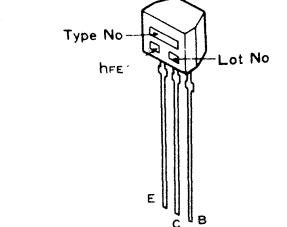
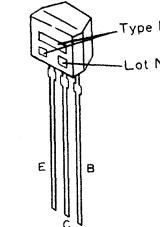
LB1214

2SA1516  
2SC39072SA968  
2SC2238  
2SD8802SA1346  
2SC3400  
RN1201  
RN1203  
RN2201  
RN2203M5218P  
M5218PF2SA992  
2SB560  
2SC1845

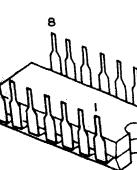
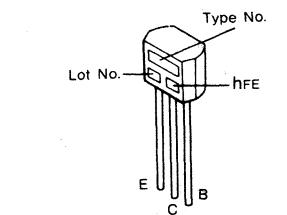
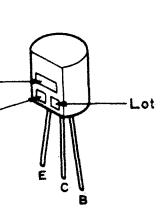
2SD438



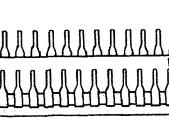
M5278L56(A)

2SA1048  
2SC2458DTA124ES  
DTA143ES  
DTC143ES

PA0016

2SA1115  
2SC2603JA101  
JC501

TC9163N



## 7. ELECTRICAL PARTS LIST

**NOTES:**

- Parts without part number cannot be supplied.
  - Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
  - The △ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
  - For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.
- ★★ GENERALLY MOVES FASTER THAN ★  
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω 56 × 10<sup>1</sup> 561..... RDI/4PS □ □ J  
47kΩ 47 × 10<sup>3</sup> 473..... RDI/4PS □ □ J  
0.5Ω 0R5..... RN2H □ □ K  
1Ω 010..... RS1P □ □ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ 562 × 10<sup>1</sup> 5621..... RNI/4SR □ □ □ F

**Miscellaneous Parts**
**P.C BOARD ASSEMBLIES**

| Mark | Symbol & Description  | Part No. | Mark | Symbol & Description | Part No.                                      |
|------|-----------------------|----------|------|----------------------|---|
| △ ◎  | AF main assembly      | AWZ1409  | ★★   | Q313, Q314           | 2SA1145                                       |
| ◎    | Control main assembly | AWZ1413  | ★★   | Q315, Q316           | 2SC2705                                       |
|      | VR assembly           |          | ★★   | Q317, Q318           | 2SC2238                                       |
|      | LED assembly          |          | ★★   | Q319, Q320           | 2SA968  |
|      | ST-BY assembly        |          | ★★   | Q403, Q404           | 2SC2458<br>(JC501)<br>(2SC1740S)<br>(2SC2603) |
|      | Jumper assembly       |          | ★★   | Q405                 | 2SA1048<br>(JA101)<br>(2SA1115)<br>(2SA933S)  |
|      | Headphone assembly    |          | ★★   | Q406, Q602, Q603     | 2SD438  |
|      | SP SW assembly        |          |      |                      |   |
|      | SP OUT assembly       |          |      |                      |   |

**OTHERS**

| Mark | Symbol & Description                 | Part No. |
|------|--------------------------------------|----------|
| ★★   | Q3, Q4 Transistor                    | 2SA1516  |
| ★★   | Q1, Q2 Transistor                    | 2SC3907  |
| △ ★  | T1 Power transformer<br>(AC220/240V) | ATS1082  |
| △    | AC Socket 3P<br>(AC OUTLET)          | AKP-502  |
| △ ★★ | FU2 Fuse (T2A)                       | AEK-017  |
| △ ★★ | FU1 Fuse (T2.5A)                     | AEK-403  |
| △    | AC power cord                        | ADG1021  |

**△ ◎ AF main assembly (AWZ1409)**
**SEMICONDUCTORS**

| Mark | Symbol & Description  | Part No.     |
|------|-----------------------|--------------|
| ★★   | IC101                 | M5218P       |
| ★★   | IC103                 | M5218PF      |
| ★★   | IC601                 | M5278L56 (A) |
| ★★   | IC301, IC302          | PA0016       |
| ★★   | IC602                 | TA7291S      |
| ★★   | IC102                 | TC9163N      |
| ★★   | Q301—Q306, Q401, Q402 | 2SC1845      |
| ★★   | Q307—Q310             | 2SA992       |

**RELAYS**

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| △ ★★ | RY401 (PROTECTION)   | ASR-112  |
| △ ★★ | RY601 (POWER)        | ASR-512  |

**COILS & TRANSFORMER**

| Mark | Symbol & Description                                    | Part No. |
|------|---|----------|
|      | L301, L302 AF choke coil<br>(0.7μH)                     | ATH1011  |
| △ ★  | T601 Power transformer<br>(AC110,120—127/<br>220, 240V) | ATT1015  |

**CAPACITORS**

| Mark | Symbol & Description                                | Part No.           |
|------|---|--------------------|
| △    | C614 (0.01μF/ V)<br>C609, C610, C613<br>(0.01μF/ V) | ACG1002<br>ACG1005 |
|      | C601, C602 (8200μF/63V)                             | ACH1044            |
|      | C325—C328   | CCCSL101K500       |
|      | C311—C314   | CCCSL150J50        |

| Mark | Symbol & Description                  | Part No.    |
|------|---------------------------------------|-------------|
|      | C103, C104, C107, C108,<br>C303, C304 | CCCSL221J50 |
|      | C305—C308, C321, C322                 | CCCSL470J50 |
|      | C319, C320, C323, C324                | CCCSL680J50 |
|      | C401, C402                            | CEANP010M50 |

| Mark | Symbol & Description   | Part No.    |
|------|------------------------|-------------|
|      | C405                   | CEAS010M100 |
|      | C406                   | CEAS010M50  |
|      | C101, C102, C119, C120 | CEAS100M25  |
|      | C612                   | CEAS101M10  |
|      | C404, C607, C608       | CEAS101M25  |

| Mark | Symbol & Description   | Part No.   |
|------|------------------------|------------|
|      | C611                   | CEAS102M25 |
|      | C603, C604             | CEAS102M35 |
|      | C115, C116             | CEAS2R2M50 |
|      | C105, C106             | CEAS470M10 |
|      | C113, C114, C123, C124 | CEAS470M16 |

| Mark | Symbol & Description   | Part No.    |
|------|------------------------|-------------|
|      | C606                   | CEAS470M25  |
|      | C403                   | CEAS471M6   |
|      | C301, C302             | CEYA100M25  |
|      | C315, C316             | CEYA331M16  |
|      | C335, C336             | CEYA470M63  |
|      | C615, C616             | CEYA470M25  |
|      | C317, C318, C333, C334 | CFTXA223J50 |
|      | C329—C332              | CFTXA823J50 |
|      | C309, C310             | CKCYB182K50 |
|      | C117, C118, C121, C122 | CKCYX104M25 |
|      | C109, C110             | CQMA222J50  |
|      | C111, C112             | CQMA882J50  |

| Mark | Symbol & Description   | Part No.    |
|------|------------------------|-------------|
|      | C606                   | CEAS470M25  |
|      | C403                   | CEAS471M6   |
|      | C301, C302             | CEYA100M25  |
|      | C315, C316             | CEYA331M16  |
|      | C335, C336             | CEYA470M63  |
|      | C615, C616             | CEYA470M25  |
|      | C317, C318, C333, C334 | CFTXA223J50 |
|      | C329—C332              | CFTXA823J50 |
|      | C309, C310             | CKCYB182K50 |
|      | C117, C118, C121, C122 | CKCYX104M25 |
|      | C109, C110             | CQMA222J50  |
|      | C111, C112             | CQMA882J50  |

| Mark | Symbol & Description   | Part No.    |
|------|------------------------|-------------|
|      | C606                   | CEAS470M25  |
|      | C403                   | CEAS471M6   |
|      | C301, C302             | CEYA100M25  |
|      | C315, C316             | CEYA331M16  |
|      | C335, C336             | CEYA470M63  |
|      | C615, C616             | CEYA470M25  |
|      | C317, C318, C333, C334 | CFTXA223J50 |
|      | C329—C332              | CFTXA823J50 |
|      | C309, C310             | CKCYB182K50 |
|      | C117, C118, C121, C122 | CKCYX104M25 |
|      | C109, C110             | CQMA222J50  |
|      | C111, C112             | CQMA882J50  |

| Mark | Symbol & Description | Part No.   |
|------|----------------------|------------|
|      | C606                 | CEAS470M25 |
|      | C403                 | CEAS471M6  |
|      | C301, C302           |            |

**CAPACITORS**

| Mark                    | Symbol & Description | Part No. |
|-------------------------|----------------------|----------|
| C501                    | (47000μF/6.3V)       | ACH1037  |
| C205, C206              | CCCSL330J50          |          |
| C201, C202, C217, C218, | CEAS100M25           |          |
| C221, C222              |                      |          |
| C502, C508              | CEAS101M10           |          |
| C211, C212              | CEAS2R2M50           |          |
| C507                    | CEAS4R7M50           |          |
| C219, C220, C229, C230  | CEAS470M25           |          |
| C227, C228              | CEJA2R2M50           |          |
| C225, C226              | CFTXA334J50          |          |
| C223, C224              | CFTXA474J50          |          |
| C506                    | CKCYB102K50          |          |
| C503, C505              | CKCYX104M25          |          |
| C207, C208              | CQMA122K50           |          |
| C213, C214              | CQMA124K50           |          |
| C215, C216              | CQMA333K50           |          |
| C209, C210              | CQMA472K50           |          |

**RESISTORS**

| Mark                    | Symbol & Description     | Part No. |
|-------------------------|--------------------------|----------|
| ★ VR204                 | 10kx2 (BALANCE)          | ATC1025  |
| ★ VR203                 | 5kx2 (BASS-EQ)           | ATC1026  |
| ★ VR201, VR202          | 100kx2<br>(BASS, TREBLE) | ATC1029  |
| R501                    | RD1/2PM681J              |          |
| R243, R244, R247, R248, | RD1/4PM □ □ □ J          |          |
| R504, R522              |                          |          |
| Other resistors         | RD1/8PM □ □ □ J          |          |

**OTHERS**

| Mark                         | Symbol & Description | Part No. |
|------------------------------|----------------------|----------|
| PL501, PL502                 | Pilot lamp           | AEL-175  |
| X501                         | Ceramic oscillator   | ASS1010  |
| Remote control receiver unit |                      | AXX1005  |

**VR assembly  
INDUCTORS**

| Mark       | Symbol & Description | Part No. |
|------------|----------------------|----------|
| L201, L202 | (5.6μH)              | ATH-065  |

**CAPACITORS**

| Mark       | Symbol & Description | Part No.    |
|------------|----------------------|-------------|
| C231, C232 |                      | CKCYX473M25 |

**RESISTOR**

| Mark    | Symbol & Description           | Part No. |
|---------|--------------------------------|----------|
| ★ VR205 | 100kx2w/Motor<br>(MAIN VOLUME) | ACX1004  |

**LED assembly****SEMICONDUCTOR**

| Mark   | Symbol & Description | Part No. |
|--------|----------------------|----------|
| ★ D525 |                      | AEL1003  |

**ST-BY assembly****SEMICONDUCTORS**

| Mark         | Symbol & Description | Part No. |
|--------------|----------------------|----------|
| ★ D522, D523 |                      | AEL1004  |

**SWITCH**

| Mark    | Symbol & Description | Part No.             |
|---------|----------------------|----------------------|
| ★★ S509 | Tact switch (ST-BY)  | ASG-711<br>(ASG-703) |

**Jumper assembly****CAPACITORS**

| Mark       | Symbol & Description | Part No.    |
|------------|----------------------|-------------|
| C509, C510 |                      | CKCYX104M25 |

**Headphone assembly****OTHER**

| Mark          | Symbol & Description | Part No. |
|---------------|----------------------|----------|
| Jack (PHONES) |                      | AKN1002  |

**SP SW assembly  
SWITCH**

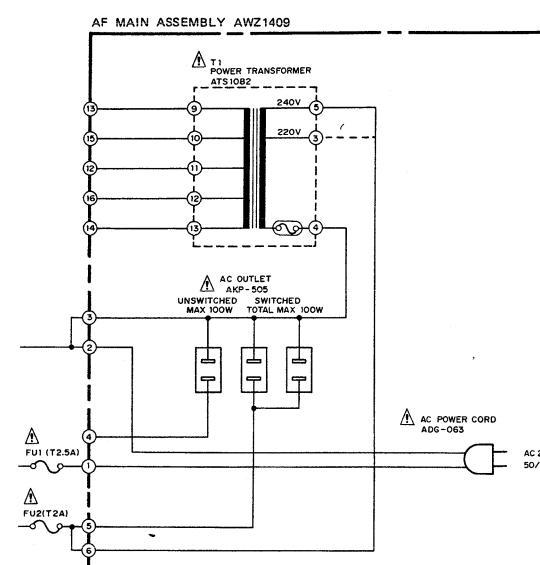
| Mark    | Symbol & Description | Part No. |
|---------|----------------------|----------|
| ★★ S301 | Push switch (SP A/B) | SUL8LXYS |

**RESISTORS**

| Mark       | Symbol & Description | Part No.   |
|------------|----------------------|------------|
| R367, R368 |                      | RS2LMF331J |

**SP OUT assembly  
OTHERS**

| Mark   | Symbol & Description | Part No.           |
|--|----------------------|--------------------|
| Terminal board 8P<br>(SPEAKERS L/R)<br>Mini-jack<br>(REMOTE CONTROL OUT) |                      | AKE-111<br>AKN-207 |

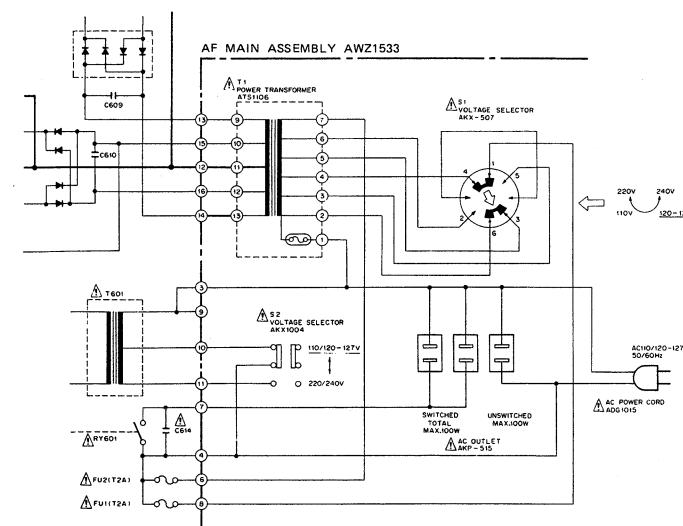
**8. FOR HB AND SD TYPES****8.1 SCHEMATIC DIAGRAM****Schematic diagram for HB type****Line Voltage Selection for HE and HB types**

1. Disconnect the AC power cord.
2. Remove the bonnet case.
3. Change the connection wire to transformer(ATS1082) from AF MAIN assembly as follows.

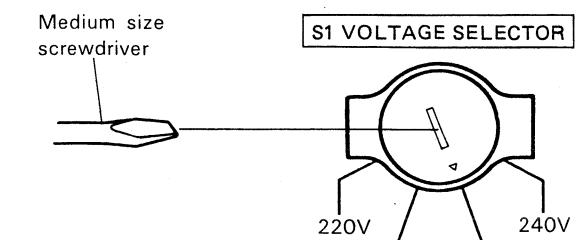
| Terminal No. of transformer |   |
|-----------------------------|---|
| 220V                        | 3 |
| 240V                        | 5 |

4. Stick the line voltage label on the rear panel.

| Description | Part No. |
|-------------|----------|
| 220V label  | AAX-193  |
| 240V label  | AAX-192  |

**Schematic diagram for SD type****Change of line Voltage for SD type**

- Be sure to switch both S1 and S2 selector switches.
1. Using a medium-size screwdriver, turn the switch S1 to the position of desired voltage (Fig. A).
  2. Change the position of switch S2 accordingly to the above voltage (Fig. B).



S1 VOLTAGE SELECTOR

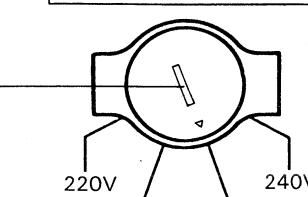


Fig. A

S2 VOLTAGE SELECTOR

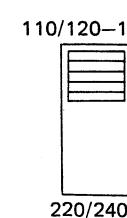


Fig. B

## 8.2 CONTRAST OF MISCELLANEOUS PARTS

### NOTES:

- Parts without part number cannot be supplied.
  - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
  - For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.
- ★★ GENERALLY MOVES FASTER THAN ★**  
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by “●” are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

## CONTRAST OF MISCELLANEOUS PARTS

The A-X530/HB and SD types are the same as the A-X530/HE type with the exception of the following sections.

| Mark   | Symbol & Description                                      | Part No.           |                    |                    | Remark |
|--|---|--------------------|--------------------|--------------------|--------|
|  |   | A-X530/<br>HE type | A-X530/<br>HB type | A-X530/<br>SD type |        |
|       | AC power cord   | ADG1021            | ADG-063            | ADG1015            |        |
|  ★★   | FU2 Fuse (T2A)  | AEK-017            | AEK-511            | AEK-017            |        |
|  ★★   | FU1 Fuse (T2.5A)  | AEK-403            | AEK-512            | .....              |        |
|  ★★   | FU1 Fuse (T2A)  | .....              | .....              | AEK-017            |        |
|      | AC socket 3P (AC OUTLET)                                  | AKP-502            | AKP-505            | AKP-515            |        |
|  | Operating instructions<br>(English)                       | .....              | ARB1080            | ARB1080            |        |
|  | Operating instructions<br>(English/German/French/Italian) | ARE1051            | .....              | .....              |        |
|  ★  | T1 Power transformer<br>(AC220/240V)                      | ATS1082            | ATS1082            | .....              |        |
|  ★  | T1 Power transformer<br>(AC110/120-127/220/240V)          | .....              | .....              | ATS1106            |        |
|     | AF main assembly*   | AWZ1409            | AWZ1409            | AWZ1533            |        |
|  ★★ | S1 Voltage selector<br>(110/120-127/220/240V)             | .....              | .....              | AKX-507            |        |
|  ★★ | S2 Voltage selector<br>(110, 120-127/220, 240V)           | .....              | .....              | AKX1004            |        |

\* Marked P.C. board assemblies:

Regard less differences on parts numbers, the P.C. board assemblies for the additional types are identical with the HE type.

## 9. PACKING

### Parts List of Packing

| Mark | No.                      | Part No.  | Description |
|------|--------------------------|---|-------------|
| 1    | ADE-085                  | Connection cord   |             |
| 2    | ARE1051<br>(HE type)     | Operating instructions<br>(English/French/<br>German/Italian) |             |
|      | ARB1080<br>(HB, SD type) | Operating instructions<br>(English)                           |             |
| 3    | AXD1024                  | Remote control unit   |             |
| 4    | AHA1069                  | Pad (Front, Rear)   |             |
| 5    | AHD1232                  | Packing case  |             |
| 51   |                          | Battery   |             |
| 52   |                          | Packing sheet   |             |
| 53   |                          | Catalogue bag   |             |

